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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,479	08/01/2001	Erdal Paksoy	TI-31551	5575
23494	7590	02/03/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			CHAWAN, VIJAY B	
			ART UNIT	PAPER NUMBER
			2654	
DATE MAILED: 02/03/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/920,479

Applicant(s)

PAKSOY ET AL.

Examiner

Vijay B. Chawan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

1. Claims 3-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tucker et al., (6,675,144) in view of Smythe et al., (5,978,762) and further in view of Akamine et al., (re36,721).

As per claim 1, Tucker et al., teach a method of wideband speech decoding comprising:

- (a) decoding a first portion of an input signal as a lowband speech signal (Col.3, lines 16-17);

(b) decoding a second portion of an input signal by a portion of the results of said decoding as a lowband speech signal of preceding step (a) (Col.3, lines 26-33, Col.6, lines 36-46, Col.7, lines 17-60); and,

(c) combining the results of the forgoing steps (a) and (b) to form a decoded wideband speech signal (Col.1, lines 61-64, Col.6, lines 36-46, Col.7, lines 28-60).

Tucker et al., however do not specifically teach noise modulated signal. Smythe et al., do teach decoding a speech signal using noise modulation using an ADPCM filter (Col.9, lines 9-30). Therefore it would have been obvious to one with ordinary skill in the art at the time of invention to using the decoding method of Smythe et al., in the method of Tucker et al., because, one with ordinary skill in the art would readily realize that splitting the signal into a smaller number of sub-bands reduces the audible effects of noise modulation and allows the exploitation of long-term spectral variances in audio signals. Smythe et al., Col.2, lines 27-35).

Tucker et al., in view of Smythe et al., however, do not specifically teach adaptive smoothing. Akamine et al., do teach a smoothing circuit to smooth a power spectrum of a speech signal (Col. 27, lines 16-22, Fig.30). Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention was made to modify the method of wideband speech decoding of Tucker et al., in view of Smythe et al., with the adaptive smoothing technique of Akamine et al., because this would enable the signal to be streamlined to be more easily combinable with another signal to form a wideband signal.

Claim 2 is directed toward an apparatus to implement the method of claim 1, and is similar in scope and content and is rejected under similar rationale.

Response to Arguments

4. Applicant's arguments filed 11/21/2005 have been fully considered but they are not persuasive.

Applicant argues that Tucker does not show modulated white noise excitation, and "Smythe does not suggestion a modulated noise excitation for Tucker". Examiner disagrees. It would have been obvious to one with ordinary skill in the art at the time of invention to using the decoding method of Smythe et al., in the method of Tucker et al., because, one with ordinary skill in the art would readily realize that splitting the signal into a smaller number of sub-bands reduces the audible effects of noise modulation and allows the exploitation of long-term spectral variances in audio signals. Smythe et al., Col.2, lines 27-35). it would have been obvious to one with ordinary skill in the art at the time of invention was made to modify the method of wideband speech decoding of Tucker et al., in view of Smythe et al., with the adaptive smoothing technique of Akamine et al., because this would enable the signal to be streamlined to be more easily combinable with another signal to form a wideband signal. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

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combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vijay B. Chawan whose telephone number is (571) 272-7601. The examiner can normally be reached on Monday Through Friday 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vijay B. Chawan
Primary Examiner
Art Unit 2654

VIJAY CHAWAN
PRIMARY EXAMINER

vbc
2/1/06